**Student Name:** **Student ID:**

# Objectives

* Define a Python class.
* Create Python object.
* Use class functions.
* Define class methods.
* Explain inheritance.

# Important Information

* For *every* lab and home assignment, store all your work in your personal repository in a subdirectory named **mXX**, where XX is the module number. Carefully name the program as described in each problem.
* Your programs are extracted from your repository by a Python script. If there are any errors in the program name, then your instructor will never see your program, and you will receive a mark of zero.
* Push your work to the server often, and ensure that you push the final version of a program by the deadline specified, because the script extracting them can be run at any time after the deadline.

# Instructions

1. Read chapters 12–14 in *How to Think Like a Computer Scientist: Learning with Python*, available at [www.greenteapress.com/thinkpython/thinkCSpy.pdf](http://www.greenteapress.com/thinkpython/thinkCSpy.pdf).
2. Complete Problem 4.

**Note:** Problem numbering continues from the module’s lab.

## Problem 4

Write a Python program named **m04p04.py** that displays the process tree in a format similar to that in Problem 3 of the Module 4 lab, but this time use graphical user interface (GUI). Use the Python gi module as follows:

import gi

gi.require\_version('Gtk','3.0')

from gi.repository import Gtk, Gdk

from gi.repository.GdkPixbuf import InterpType

from gi.repository.GdkPixbuf import Pixbuf

import cairo

* Design the user interface using Glade.
* Split the top window into two panes:
  + On the left, display the process information (as Problem 3 does) using the **TreeView** widget.
  + On the right, display information about the selected process.
* The process can be selected by either clicking on the process row in the left pane or by typing the process number in an entry box.
* Create an Exit button to close the application.